

# Other Metalworking Machinery Manufacturing: 2002

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## 2002 Economic Census

*Manufacturing*

Industry Series



U.S. CENSUS BUREAU

*Helping You Make Informed Decisions*

U.S. Department of Commerce  
Economics and Statistics Administration  
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-- Not applicable for this report.

**Table 1. Historical Statistics for the Industry: 2002 and Earlier Years**

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry and year <sup>1</sup>	Com- panies <sup>2</sup>	All estab- lish- ments <sup>3</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expendi- tures (\$1,000)
			Number <sup>4</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)				
333518, Other metalworking machinery manufacturing .....	2002..	414	455	16 769	803 291	9 598	20 048	399 538	1 621 007	1 242 469	2 941 394
	2001..	N	N	20 755	982 275	11 894	24 255	449 016	1 548 579	1 778 007	3 415 716
	2000..	N	N	20 977	994 561	12 491	26 924	492 506	1 874 151	1 810 926	3 748 944
	1999..	N	N	20 897	970 094	12 846	27 060	484 106	1 799 579	1 851 254	3 763 096
	1998..	N	N	19 298	926 210	11 270	24 609	468 248	1 543 797	1 616 233	3 395 473
	1997..	446	472	18 972	851 040	11 343	24 944	438 391	1 776 669	1 610 422	3 433 251
											79 241

<sup>1</sup>Statistics presented for years ending in 2 and 7 are census data. Interim census years are derived in a representative sample of manufacturing establishments canvassed in the Annual Survey of Manufactures (ASM).

<sup>2</sup>For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

<sup>3</sup>Includes establishments with payroll at any time during the year.

<sup>4</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 2. Industry Statistics for Selected States: 2002**

[States that are a disclosure or with less than 100 employees are not shown. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
	E <sup>1</sup>	Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>3</sup>	Hours (1,000)	Wages (\$1,000)			
333518, Other metalworking machinery manufacturing											
United States.....	3	455	180	16 769	803 291	9 598	20 048	399 538	1 621 007	1 242 469	2 941 394
Florida .....	—	10	4	306	11 979	177	369	6 219	32 914	23 924	55 431
Illinois .....	5	45	20	1 697	80 354	1 067	2 258	43 079	234 049	140 235	369 802
Massachusetts .....	3	16	5	405	19 683	214	457	7 779	43 730	43 304	88 406
Michigan .....	3	91	45	5 011	250 820	2 533	5 309	113 814	610 109	446 399	1 063 541
Minnesota .....	—	12	6	368	18 376	193	362	8 833	32 492	32 408	65 164
New Jersey .....	2	10	5	187	9 543	114	253	4 260	26 070	10 251	36 253
New York .....	2	18	9	990	41 216	591	1 102	21 642	62 836	57 119	126 670
North Carolina .....	3	7	3	235	8 721	157	369	4 289	14 096	9 945	25 121
Ohio .....	3	41	15	1 538	73 929	943	2 066	43 696	123 926	98 526	247 983
Oregon .....	1	6	3	338	15 322	273	555	12 100	15 580	18 510	42 478
Pennsylvania.....	6	22	7	681	28 459	452	968	16 323	46 397	23 402	72 288
Texas .....	6	13	5	393	14 678	249	498	6 650	36 607	23 711	58 893
Wisconsin .....	2	19	5	736	34 433	421	781	13 033	32 128	41 680	91 508

<sup>1</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

**Table 3. Detailed Statistics by Industry: 2002**

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Item	Value
333518, Other metalworking machinery manufacturing	
Companies <sup>1</sup> .....	number.. 414
All establishments <sup>2</sup> .....	number.. 455
Establishments with 1 to 19 employees .....	number.. 275
Establishments with 20 to 99 employees .....	number.. 138
Establishments with 100 employees or more .....	number.. 42
All employees <sup>3</sup> .....	number.. 16 769
Total compensation .....	\$1,000.. 958 490
Annual payroll .....	\$1,000.. 803 291
Total fringe benefits .....	\$1,000.. 155 199
Production workers, average for year .....	number.. 9 598
Production workers on March 12 .....	number.. 9 840
Production workers on May 12 .....	number.. 9 540
Production workers on August 12 .....	number.. 9 595
Production workers on November 12 .....	number.. 9 379
Production worker hours .....	1,000.. 20 048
Production worker wages .....	\$1,000.. 399 538
Total cost of materials .....	\$1,000.. 1 242 469
Materials, parts, containers, packaging, etc., used .....	\$1,000.. 1 009 101
Resales .....	\$1,000.. 101 594
Purchased fuels .....	\$1,000.. 4 334
Purchased electricity .....	\$1,000.. 14 936
Contract work .....	\$1,000.. 112 504
Quantity of electricity purchased for heat and power .....	1,000 kWh.. 232 532
Quantity of electricity generated less sold for heat and power .....	1,000 kWh.. D
Total value of shipments .....	\$1,000.. 2 941 394
Primary products value of shipments .....	\$1,000.. 2 553 952
Secondary products value of shipments .....	\$1,000.. 190 193
Total miscellaneous receipts .....	\$1,000.. 197 249
Value of resales .....	\$1,000.. 142 649
Contract receipts .....	\$1,000.. 25 406
Other miscellaneous receipts .....	\$1,000.. 29 194
Primary products specialization ratio .....	percent.. 93
Value of primary products shipments made in all industries .....	\$1,000.. 2 677 035
Value of primary products shipments made in this industry .....	\$1,000.. 2 553 952
Value of primary products shipments made in other industries .....	\$1,000.. 123 083
Coverage ratio .....	percent.. 95
Value added .....	\$1,000.. 1 621 007
Total inventories, beginning of year .....	\$1,000.. 586 888
Finished goods inventories .....	\$1,000.. 87 790
Work-in-process inventories .....	\$1,000.. 405 323
Materials and supplies inventories .....	\$1,000.. 93 775
Total inventories, end of year .....	\$1,000.. 511 550
Finished goods inventories .....	\$1,000.. 84 380
Work-in-process inventories .....	\$1,000.. 330 815
Materials and supplies inventories .....	\$1,000.. 96 355
Gross value of depreciable assets (acquisition costs) at beginning of year .....	\$1,000.. '1 167 839
Total capital expenditures (new and used) .....	\$1,000.. '60 966
Buildings and other structures (new and used) .....	\$1,000.. '8 215
Machinery and equipment (new and used) .....	\$1,000.. '52 751
Automobiles, trucks, etc., for highway use .....	\$1,000.. '3 135
Computers and peripheral data processing equipment .....	\$1,000.. '9 609
All other expenditures for machinery and equipment .....	\$1,000.. '40 007
Total retirements .....	\$1,000.. '42 672
Gross value of depreciable assets at end of year .....	\$1,000.. '1 186 133
Depreciation charges during year .....	\$1,000.. '93 769
Total rental payments .....	\$1,000.. 47 523
Buildings and other structures .....	\$1,000.. 33 371
Machinery and equipment .....	\$1,000.. 14 152
Total other expenses <sup>4</sup> .....	\$1,000.. 150 108
Response coverage ratio <sup>5</sup> .....	percent.. 69
Repair and maintenance services of buildings and/or machinery <sup>4</sup> .....	\$1,000.. 10 044
Communications services <sup>4</sup> .....	\$1,000.. 6 385
Legal services <sup>4</sup> .....	\$1,000.. 6 607
Accounting, auditing, and bookkeeping services <sup>4</sup> .....	\$1,000.. 3 244
Advertising and promotional services <sup>4</sup> .....	\$1,000.. 5 453
Expensed computer hardware and supplies and purchased computer services <sup>4</sup> .....	\$1,000.. 4 175
Refuse removal (including hazardous waste) services <sup>4</sup> .....	\$1,000.. 1 152
Management consulting and administrative services <sup>4</sup> .....	\$1,000.. 7 945
Taxes and license fees <sup>4</sup> .....	\$1,000.. 9 022
All other expenses <sup>4</sup> .....	\$1,000.. 96 080

<sup>1</sup>For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

<sup>4</sup>Based on 2002 Annual Survey of Manufactures (ASM) sample data.

<sup>5</sup>A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight) for those Annual Survey of Manufactures (ASM) establishments that reported to the weighted total employment for all ASM establishments classified in this industry.

Note 1: The amounts shown for other expenses reflect only those services that establishments purchase from other companies.

Note 2: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 4. Industry Statistics by Employment Size: 2002**

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Employment size class	E <sup>1</sup>	All estab- lishments <sup>2</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expendi- tures (\$1,000)
			Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>3</sup>	Hours (1,000)	Wages (\$1,000)				
333518, Other metalworking machinery manufacturing											
All establishments .....	3	455	16 769	803 291	9 598	20 048	399 538	1 621 007	1 242 469	2 941 394	'60 966
Establishments with—											
1 to 4 employees .....	7	136	290	13 380	180	336	7 144	34 588	22 016	55 832	'1 034
5 to 9 employees .....	6	61	417	21 741	254	526	12 132	40 805	37 499	80 754	'996
10 to 19 employees .....	2	78	1 110	51 429	704	1 450	28 181	93 528	84 687	186 201	'4 022
20 to 49 employees .....	1	91	2 834	134 777	1 712	3 479	67 493	301 826	185 916	493 085	'12 730
50 to 99 employees .....	1	47	3 308	162 653	2 021	4 259	87 120	324 484	270 065	593 567	'12 578
100 to 249 employees .....	2	33	5 085	252 287	3 059	6 628	133 606	437 349	351 352	826 108	'16 277
250 to 499 employees .....	6	7	h	D	D	D	D	D	D	D	D
500 to 999 employees .....	7	2	9	D	D	D	D	D	D	D	D
1,000 to 2,499 employees .....	—	—	—	—	—	—	—	—	—	—	—
2,500 employees or more .....	—	—	—	—	—	—	—	—	—	—	—
Administrative records <sup>4</sup> .....	9	154	491	23 977	297	604	12 563	41 705	40 276	81 980	'1 576

<sup>1</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

<sup>4</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 5. Industry Statistics by Primary Product Class Specialization: 2002**

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry or product class code	Industry or primary product class	All establishments <sup>1</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number <sup>2</sup>	Payroll (\$1,000)	Number <sup>2</sup>	Hours (1,000)	Wages (\$1,000)				
333518	Other metalworking machinery manufacturing .....	455	16 769	803 291	9 598	20 048	399 538	1 621 007	1 242 469	2 941 394	'60 966
3335181	Assembly machines .....	165	11 515	571 554	6 469	13 668	283 478	1 154 257	905 134	2 115 939	'37 625
3335183	Other metalworking machinery (except handheld and ultrasonic) ..	101	3 899	169 318	2 273	4 575	82 613	373 138	267 036	658 782	'19 889

<sup>1</sup>Includes establishments with payroll at any time during the year.

<sup>2</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 6a. Products Statistics: 2002 and 1997**

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
333518	Other metalworking machinery manufacturing .....	2002..	N	X	2 677 035
		1997..	N	X	3 199 715
3335181	Assembly machines .....	2002..	N	X	1 829 917
33351811	Rotary transfer metalworking assembly machines (dial and rotary, trunnion, center column) .....	2002..	N	X	2 010 605
3335181101	Rotary transfer metalworking assembly machines (dial and rotary, trunnion, center column) .....	1997..	N	X	213 102
33351812	Inline transfer, synchronous metalworking assembly machines .....	2002..	N	X	192 309
3335181206	Inline transfer, synchronous metalworking assembly machines .....	1997..	N	X	288 938
33351813	Inline transfer, nonsynchronous metalworking assembly machines .....	2002..	35	X	308 248
3335181301	Inline transfer, nonsynchronous metalworking assembly machines .....	1997..	48	X	288 938
3335181311	Special-purpose and other types of metalworking assembly machines .....	2002..	N	X	237 987
3335181416	Special-purpose and other types of metalworking assembly machines .....	1997..	N	X	241 928
33351815	Parts and attachments for metalworking assembly machines (sold separately) .....	2002..	N	X	864 957
3335181521	Parts and attachments for metalworking assembly machines (sold separately) .....	1997..	N	X	1 049 893
3335181Y	Assembly machines, nsk .....	2002..	71	X	135 398
3335181YWV	Assembly machines, nsk .....	1997..	52	X	81 390
3335183	Other metalworking machinery (except handheld and ultrasonic) .....	2002..	N	X	738 344
33351831	Other metalworking machinery (except handheld and ultrasonic) .....	1997..	N	X	868 597
3335183101	Metalworking draw benches and wiredrawing machines (except dies, handheld, and ultrasonic) .....	2002..	N	X	707 351
3335183106	Wire rope and wire cable making machines (except handheld and ultrasonic) .....	2002..	6	X	815 214
3335183111	Other metalworking machines for working wire (except handheld and ultrasonic) .....	1997..	6	X	7 862
3335183116	Cut-to-length coil handling lines (conversion or straightening) (except handheld and ultrasonic) .....	2002..	6	X	14 770
3335183121	Slitting coil handling lines (conversion or straightening) (except handheld and ultrasonic) .....	1997..	20	X	5 598
3335183126	Other metalworking machinery (except handheld and ultrasonic) .....	2002..	17	X	21 468
3335183131	Parts and attachments for other metalworking machinery (except handheld and ultrasonic) (sold separately) .....	2002..	20	X	79 762
3335183131	Parts and attachments for other metalworking machinery (except handheld and ultrasonic) (sold separately) .....	1997..	17	X	100 022
3335183132	Other metalworking machinery (except handheld and ultrasonic) .....	2002..	22	X	172 305
3335183132	Other metalworking machinery (except handheld and ultrasonic) .....	1997..	20	X	203 836
3335183133	Other metalworking machinery (except handheld and ultrasonic) .....	2002..	9	X	40 895
3335183133	Other metalworking machinery (except handheld and ultrasonic) .....	1997..	12	X	58 648
3335183134	Parts and attachments for other metalworking machinery (except handheld and ultrasonic) (sold separately) .....	2002..	59	X	347 449
3335183134	Parts and attachments for other metalworking machinery (except handheld and ultrasonic) (sold separately) .....	1997..	72	X	357 746
3335183135	Other metalworking machinery (except handheld and ultrasonic), nsk .....	2002..	35	X	53 480
3335183135	Other metalworking machinery (except handheld and ultrasonic), nsk .....	1997..	33	X	58 724
3335183136	Other metalworking machinery (except handheld and ultrasonic), nsk .....	2002..	N	X	30 993
3335183136	Other metalworking machinery (except handheld and ultrasonic), nsk .....	1997..	N	X	53 383
333518W	Other metalworking machinery manufacturing, nsk, total .....	2002..	N	X	108 774
333518WY	Other metalworking machinery manufacturing, nsk, total .....	1997..	N	X	320 513
333518WYWW	Other metalworking machinery manufacturing, nsk, for nonadministrative-record establishments .....	2002..	N	X	108 774
333518WYWW	Other metalworking machinery manufacturing, nsk, for nonadministrative-record establishments .....	1997..	N	X	320 513
333518WYWW	Other metalworking machinery manufacturing, nsk, for administrative-record establishments .....	2002..	N	X	46 019
333518WYWW	Other metalworking machinery manufacturing, nsk, for administrative-record establishments .....	1997..	N	X	258 367
333518WYWW	Other metalworking machinery manufacturing, nsk, for administrative-record establishments .....	2002..	N	X	62 755
333518WYWW	Other metalworking machinery manufacturing, nsk, for administrative-record establishments .....	1997..	N	X	62 146

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p=10 to 19 percent estimated; q=20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 6b. Product Class Shipments for Selected States: 2002 and 1997**

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 2002. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographic definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS product class code	Product class and geographic area	Value of product shipments (\$1,000)
3335181	Assembly machines	
	United States.....	2 829 917
	1997..	2 010 605
	Florida .....	12 178
	1997..	9 618
	Illinois .....	268 122
	1997..	248 745
	Kentucky .....	19 874
	1997..	7 130
	Michigan.....	846 115
	1997..	834 747
	Minnesota .....	26 187
	1997..	26 459
	New York .....	97 515
	1997..	108 545
	North Carolina.....	12 481
	1997..	9 101
	Ohio .....	117 430
	1997..	118 528
	Pennsylvania.....	36 999
	1997..	85 959
	Tennessee.....	50 345
	1997..	N
	Texas .....	8 349
	1997..	8 899
3335183	Other metalworking machinery (except handheld and ultrasonic)	
	United States.....	738 344
	1997..	868 597
	Florida .....	45 022
	1997..	N
	Illinois .....	51 961
	1997..	77 940
	Massachusetts .....	56 415
	1997..	13 785
	Michigan.....	156 173
	1997..	97 569
	New Jersey .....	20 554
	1997..	44 063
	New York .....	12 305
	1997..	53 322
	Ohio .....	70 051
	1997..	128 979
	Texas .....	42 975
	1997..	32 063
	Wisconsin .....	31 560
	1997..	54 542

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

**Table 7. Materials Consumed by Kind: 2002 and 1997**

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Material code	Material consumed	Quantity	Delivered cost (\$1,000)
333518	Other metalworking machinery manufacturing		
00900001	Total materials .....	2002.. X 1 009 101 1997.. X 1 311 312	
33399601	Fluid power pumps, motors, and hydrostatic transmissions (hydraulic and pneumatic) .....	2002.. X 17 758 1997.. X 25 918	
33399501	Fluid power cylinders and rotary actuators (hydraulic and pneumatic) .....	2002.. X 11 474 1997.. X 14 140	
33399901	Fluid power filters (hydraulic and pneumatic) .....	2002.. X 1 084 1997.. X 1 819	
33291203	Fluid power hose and tube fittings and assemblies (hydraulic and pneumatic) .....	2002.. X 4 032 1997.. X 5 471	
33291207	Fluid power valves (hydraulic and pneumatic) .....	2002.. X 11 961 1997.. X 14 767	
33272203	Metal bolts, nuts, screws, washers, rivets, and other screw machine products .....	2002.. X 11 653 1997.. X 11 639	
33200051	Other fabricated metal products (excluding fluid power products and forgings) .....	2002.. X 35 586 1997.. X N	
33210000	Forgings .....	2002.. X 1 442 1997.. X N	
33151001	Iron and steel castings (rough and semifinished) .....	2002.. X 34 529 1997.. X 41 070	
33152011	Nonferrous (aluminum, copper, etc.) castings (rough and semifinished) .....	2002.. X 2 781 1997.. X 3 757	
33120007	Steel bars, bar shapes, and plate (excluding castings, forgings, and fabricated metal products) .....	2002.. X 27 282 1997.. X 30 806	
33120016	Steel sheet and strip (including tinplate) .....	2002.. X 14 239 1997.. X N	
33120069	Steel structural shapes (excluding castings, forgings, and fabricated metal products) .....	2002.. X 5 987 1997.. X 7 508	
33120092	All other steel shapes and forms (excluding castings, forgings, and fabricated metal products) .....	2002.. X 5 555 1997.. X N	
331000AJ	Nonferrous metal shapes and forms (excluding castings, forgings, and fabricated metal products) .....	2002.. X 2 951 1997.. X 3 046	
33531209	Fractional horsepower electric timing motors, synchronous and subsynchronous (less than 1 hp) .....	2002.. X 9 594 1997.. X 15 133	
33531217	Other fractional horsepower electric motors (less than 1 hp) .....	2002.. X 9 989 1997.. X 2 737	
33531221	Integral horsepower electric motors and generators (1 hp or more) .....	2002.. X 16 834 1997.. X 20 268	
001900B1	Electrical transmission, distribution, and control equipment .....	2002.. X 75 591 1997.. X 85 359	
33500007	Electrical industrial capacitors, resistors, rheostats, and coil windings .....	2002.. X 5 880 1997.. X 7 026	
33531409	Numerical controls for metalworking machinery (excluding programmable) .....	2002.. X 2 593 1997.. X 4 069	
33531411	Programmable controllers for metalworking machinery .....	2002.. X 20 433 1997.. X 23 346	
001900C4	Printed circuit assemblies, loaded boards, and modules (printed circuit boards with inserted electronic components) .....	2002.. X 11 617 1997.. X N	
33441200	Printed circuit boards (without inserted components) for electronic circuitry .....	2002.. X 2 075 1997.. X N	
33441300	Semiconductors (including transistors, diodes, rectifiers, and integrated circuits), for electronic circuitry .....	2002.. X 3 721 1997.. X N	
001900D3	All other miscellaneous components and accessories, for electronic circuitry (excluding tubes) .....	2002.. X 7 141 1997.. X N	
33451501	Electrical instrument mechanisms and meter movements (including instrument relays) .....	2002.. X 4 136 1997.. X N	
33422001	Electronic communication equipment .....	2002.. X 10 004 1997.. X N	
33331401	Optical instruments and lenses (excluding sighting, tracking, and fire control) .....	2002.. X 1 843 1997.. X N	
33299105	Ball bearings (mounted or unmounted) .....	2002.. X 9 330 1997.. X 12 310	
33299103	Roller bearings (mounted or unmounted) .....	2002.. X 6 030 1997.. X 6 853	
33361200	Mechanical speed changers, gears, and industrial high-speed drives .....	2002.. X 12 114 1997.. X 14 465	
32192001	Wood boxes, pallets, skids, and containers .....	2002.. X 3 221 1997.. X 4 255	
33351503	Cutting tools for machine tools .....	2002.. X 7 768 1997.. X 10 251	
32610007	Fabricated plastics products (excluding gaskets, hoses, and belting) .....	2002.. X 11 175 1997.. X N	
32220017	Paper and paperboard containers (including shipping sacks and other paper packaging supplies) .....	2002.. X 2 560 1997.. X N	
00970099	All other materials and components, parts, containers, and supplies .....	2002.. X 225 319 1997.. X 458 073	
00971000	Materials, ingredients, containers, and supplies, nsk .....	2002.. X 361 819 1997.. X 487 226	

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.